Complete Summary

GUIDELINE TITLE

Management of genital Chlamydia trachomatis infection. A national clinical guideline.

BIBLIOGRAPHIC SOURCE(S)

Scottish Intercollegiate Guidelines Network. Management of genital Chlamydia trachomatis infection. A national clinical guideline. Edinburgh (Scotland): Scottish Intercollegiate Guidelines Network (SIGN); 2000 Mar. 26 p. (SIGN publication; no. 42). [176 references]

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Chlamydia trachomatis infection:

- Uncomplicated infection
- Uncomplicated infection in pregnancy
- Upper genital tract infection in women (Chlamydial salpingitis/pelvic inflammatory disease)
- Upper genital tract infection in men (Chlamydial epididymo-orchitis)

GUIDELINE CATEGORY

Diagnosis
Evaluation
Management
Prevention
Treatment

CLINICAL SPECIALTY

Family Practice
Internal Medicine
Obstetrics and Gynecology
Urology

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Nurses
Physician Assistants
Physicians
Students

GUIDELINE OBJECTIVE(S)

- To present evidence-based recommendations for the prevention, diagnosis, treatment and management of chlamydial infection.
- To specifically address the following questions:
    - In which circumstances should potential chlamydial infection be sought routinely in adults?
    - What is the optimum management of patients identified as Chlamydia trachomatis positive?

TARGET POPULATION

1. Individual patients presenting with signs and symptoms of genital chlamydial infection.
2. Asymptomatic patients in the following specific circumstances:
    - All women undergoing termination of pregnancy.
    - All patients attending genitourinary medicine clinics.
    - All patients with another sexually transmitted infection, including genital warts.
    - Sexual partners of those with chlamydial infection.
    - Mothers of infants with chlamydial conjunctivitis or pneumonitis.
    - Semen and egg donors.
    - Sexual partners of those with suspected chlamydial infection.
    - Women younger than 25 years and sexually active (targeted for opportunistic testing).
    - Women aged 25 years or older with two or more partners in the last year or a change of sexual partner in the last year (targeted for opportunistic testing).

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnosis

1. Laboratory testing for chlamydial infection, including cell culture, antigen detection and DNA amplification tests (ligase chain reaction [LCR] or

polymerase chain reaction [PCR]). Newer tests such as transcription-mediated amplification [TMA] and strand-displacement amplification [SDA] are considered.

Treatment

1. Uncomplicated infection: Azithromycin, doxycycline, lymecycline, minocycline or ofloxacin.
2. Uncomplicated infection in pregnancy: Erythromycin or amoxicillin.
3. Upper genital tract infection in women: Doxycycline plus metronidazole; ofloxacin as an alternative to doxycycline; clindamycin as an alternative to metronidazole.
4. Upper genital tract infection in men: Doxycycline or oxytetracycline.

Management

1. Follow up and test of cure.
2. Partner notification, including patient, provider and/or conditional referral.
3. Health education.

MAJOR OUTCOMES CONSIDERED

- Sensitivity of diagnostic testing
- Morbidity associated with chlamydial infection
- Microbiological cure rate

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The evidence base for the guideline was synthesised in accordance with the Scottish Intercollegiate Guidelines Network (SIGN) methodology. A systematic review of the literature was carried out using an explicit search strategy devised by the SIGN Information Officer in collaboration with members of the guideline development group. Searches were carried out on Medline, Embase, Social Citation Index, Cumulative Index to the Nursing and Allied Health Literature (CINAHL) and the Cochrane Library.

Articles relating to Chlamydia pneumoniae were excluded. All articles that were not related to the treatment of genital Chlamydia trachomatis infection were excluded. Where sufficient evidence was felt to be available in the English literature, the non-English literature was not reviewed. Studies involving drugs that are not available in the United Kingdom (UK), studies from developing countries and those focusing specifically on HIV/AIDS were also excluded.

Papers were only included if they adhered to recognisable methodological principles including adequate sample size, a clearly identified hypothesis and measure of outcome, and accurate reporting of results. Whenever possible randomised trials have been discussed, but due to the paucity of sound randomised controlled trials in some of the areas covered by the remit of this guideline, a number of clinical studies have also been included.

Consideration was also taken of the recommendations in the reviews carried out by the Centers for Disease Control, the Canadian Task Force on Periodic Health Examination, the Central Audit Group in Genitourinary Medicine, the Royal College of Obstetricians and Gynaecologists Study Group on the Prevention of Pelvic Infection, Leicestershire Genital Chlamydia Guidelines, and the CMO's Expert Advisory Group on Chlamydia trachomatis.

In relation to the antimicrobial treatment of Chlamydia trachomatis, studies reporting small numbers (< 50 cases), and those not specifically relating to chlamydial infection were excluded.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Statements of Evidence

Ia
Evidence obtained from meta-analysis of randomized controlled trials.

Ib
Evidence obtained from at least one randomized controlled trial.

IIa
Evidence obtained from at least one well-designed controlled study without randomization.

IIb
Evidence obtained from at least one other type of well-designed quasi-experimental study.

III
Evidence obtained from well-designed non-experimental descriptive studies, such as comparative studies, correlation studies and case studies.

IV
Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities.

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

The Scottish Intercollegiate Guidelines Network (SIGN) carries out comprehensive systematic reviews of the literature using customized search strategies applied to a number of electronic databases and the Internet. This is often an iterative process whereby the guideline development group will carry out a search for existing guidelines and systematic reviews in the first instance and, after the results of this search have been evaluated, the questions driving the search may be redefined and focused before proceeding to identify lower levels of evidence.

Once papers have been selected as potential sources of evidence, the methodology used in each study is assessed to ensure its validity. SIGN has developed checklists to aid guideline developers to critically evaluate the methodology of different types of study design. The result of this assessment will affect the level of evidence allocated to the paper, which in turn will influence the grade of recommendation it supports.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

The process for synthesizing the evidence base to form graded guideline recommendations is illustrated in the companion document titled "SIGN 50: A Guideline Developer's Handbook." (Edinburgh [UK]: Scottish Intercollegiate Guidelines Network. [SIGN publication; no. 50], available from the SIGN website.

Evidence tables should be compiled, summarizing all the validated studies identified from the systematic literature review relating to each key question. These evidence tables form an important part of the guideline development record and ensure that the basis of the guideline development group's recommendations is transparent.

In order to address how the guideline developer was able to arrive at their recommendations given the evidence they had to base them on, SIGN has introduced the concept of considered judgement.

Under the heading of considered judgement, guideline development groups are expected to summarise their view of the total body of evidence covered by each evidence table. This summary view is expected to cover the following aspects:

- Quantity, quality, and consistency of evidence
- Generalisability of study findings
- Applicability to the target population of the guideline
- Clinical impact (i.e., the extent of the impact on the target patient population, and the resources need to treat them.)

Guideline development groups are provided with a pro forma in which to record the main points from their considered judgement. Once they have considered these issues, the group are asked to summarise their view of the evidence and assign a level of evidence to it, before going on to derive a graded recommendation.

The assignment of a level of evidence should involve all those on a particular guideline development group or subgroup involved with reviewing the evidence in relation to each specific question. The allocation of the associated grade of recommendation should involve participation of all members of the guideline development group. Where the guideline development group is unable to agree a unanimous recommendation, the difference of opinion should be formally recorded and the reason for dissent noted.

The recommendation grading system is intended to place greater weight on the quality of the evidence supporting each recommendation, and to emphasise that the body of evidence should be considered as a whole, and not rely on a single study to support each recommendation. It is also intended to allow more weight to be given to recommendations supported by good quality observational studies where randomised controlled trials (RCTs) are not available for practical or ethical reasons. Through the considered judgement process guideline developers are also able to downgrade a recommendation where they think the evidence is not generalisable, not directly applicable to the target population, or for other reasons is perceived as being weaker than a simple evaluation of the methodology would suggest.

On occasion, there is an important practical point that the guideline developer may wish to emphasise but for which there is not, nor is their likely to be, any research evidence. This will typically be where some aspect of treatment is regarded as such sound clinical practice that nobody is likely to question it. These are marked in the guideline as "good practice points." It must be emphasized that these are not an alternative to evidence-based recommendations, and should only be used where there is no alternative means of highlighting the issue.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Grades of Recommendations

Grade A: Requires at least one randomized controlled trial (RCT) as part of a body of literature of overall good quality and consistency addressing the specific recommendation (Evidence levels Ia, Ib).

Grade B: Requires the availability of well conducted clinical studies but no randomised clinical trials on the topic of recommendation (Evidence levels IIa, IIb, III).

Grade C: Requires evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities. Indicates an absence of directly applicable clinical studies of good quality (Evidence level IV).

Good Practice Points: Recommended best practice based on the clinical experience of the guideline development group.

COST ANALYSIS

A detailed analysis of cost-effectiveness was beyond the remit of this guideline, which is concerned primarily with clinical effectiveness. However, the guideline has clear resource implications in terms of the cost of testing-especially in low-prevalence populations-and the cost of antimicrobial therapy. These might be offset by both the rationalization of gonococcal testing, in keeping with the current epidemiology, and by the reduction in inpatient stays and outpatient visits resulting from the complications of chlamydial infection such as pelvic inflammatory disease (PID), ectopic pregnancy, infertility, and neonatal pneumonitis and conjunctivitis.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

1. National open meeting discusses the draft recommendations of each guideline
2. Independent expert referees review the guideline.
3. The Scottish Intercollegiate Guidelines Network (SIGN) Editorial Board reviews the guideline and summary of peer reviewers' comments.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Note from the Scottish Intercollegiate Guidelines Network (SIGN) and National Guideline Clearinghouse (NGC): In addition to these evidence-based recommendations, the guideline development group also identifies points of best clinical practice in the full-text guideline document.

<u>Testing for Genital Chlamydia trachomatis Infection</u>

B* – The recommended laboratory test for Chlamydia trachomatis is a nucleic acid amplification test (e.g., ligase chain reaction [LCR] or polymerase chain reaction [PCR]).

Patients with symptoms/signs of Chlamydial infection

B – Testing for Chlamydia trachomatis should be performed in women and men with symptoms and signs which may be attributable to chlamydial infection:

- Women
    - vaginal discharge
    - post coital/intermenstrual/breakthrough bleeding
    - inflamed/friable cervix (which may bleed on contact)
    - urethritis
    - pelvic inflammatory disease
    - lower abdominal pain in the sexually active
    - reactive arthritis in the sexually active
- Men
    - urethral discharge
    - dysuria
    - urethritis
    - epididymo-orchitis in the sexually active
    - reactive arthritis in the sexually active

Asymptomatic patients

Testing for genital Chlamydia trachomatis infection should be performed in the following specific circumstances:

A – All women undergoing termination of pregnancy .

B – All patients attending genitourinary medicine clinics.

B – All patients with another sexually transmitted infection (STI), including genital warts.

B – Sexual partners of those with chlamydial infection.

B – Mothers of infants with chlamydial conjunctivitis or pneumonitis.

B – All women undergoing uterine instrumentation, including intrauterine device (IUD) insertion, who have risk factors for chlamydial infection.

B – Semen and egg donors.

C – Sexual partners of those with suspected chlamydial infection.

B – Opportunistic testing could be considered in the following groups of women:

- Women younger than 25 years and sexually active.
- Women aged 25 years or older with two more partners in the last year or a change of sexual partner in the last year.

<u>Antimicrobial Treatment For Genital Chlamydial Infection</u>

B – Initiate treatment without waiting for laboratory confirmation of infection in patients with symptoms and signs attributable to chlamydial infection and their sexual partners.

Uncomplicated Infection

A – Uncomplicated genital Chlamydia trachomatis infection may be treated with any one of the following (listed alphabetically):

- Azithromycin 1g stat
- Doxycycline 100mg twice daily for 7 days
- Lymecycline 300mg once a day for 10 days
- Minocycline 100mg once a day for 9 days
- Ofloxacin 200mg twice daily for 7 days

B – Taking into account the issue of compliance with therapy, it is recommended that uncomplicated genital Chlamydia trachomatis infection is treated with azithromycin 1g stat.

Uncomplicated Infection in Pregnancy

A – Uncomplicated genital chlamydial infection in pregnancy should be treated with:

- Erythromycin 500mg four times a day for 7 days

  or

- Amoxycillin 500mg three times a day for 7 days

A – All women undergoing termination of pregnancy should receive antimicrobial therapy effective against chlamydial infection at the time of the procedure.

Upper genital tract infection in women (Chlamydial alpingitis/pelvic inflammatory disease [PID])

C – The recommended treatment for upper genital tract infection in women is:

- Doxycycline 100mg twice daily for a minimum of 10 days plus metronidazole 200mg three times a day or 400g twice daily for the first 7 days
- Ofloxacin 400mg twice daily may be used as an alternative to doxycycline
- Clindamycin 450mg four times a day may be used as an alternative to metronidazole.

Upper genital tract infection in men (Chlamydial epididymo-orchitis)

C – The recommended treatment for upper genital tract chlamydial infection in men is:

- Doxycycline 100mg twice daily for 7-14 days

  or

- Oxytetracycline 250mg four times a day for 7-14 days

Follow up and test of cure

B – Patients should be interviewed at follow-up with regard to compliance with therapy and risk of re-infection.

B – In those patients who have been compliant with therapy in whom there is no risk of reinfection, a test of cure need not be performed.

B – Test of cure/re-infection established by molecular amplification assay should be performed a minimum of three weeks after the initiation of therapy, to avoid false positive results.

Partner Notification

B – Patients should be referred to trained health advisers for support with partner notification.

B – Patients should be offered the choice of patient, provider or conditional referral for partner notification:

- Patient referral (or self referral): when index patients themselves inform their sexual contacts to seek treatment.
- Provider referral: when the health care provider informs a patent's contacts anonymously that they should seek treatment. This is obviously more time consuming for the health care provider.
- Conditional referral: where the health care provider notifies contacts if the patient has not done so after a given number of days.

C – In men with symptomatic chlamydial infection, contact all partners over the four weeks prior to onset of symptoms.

C – In women and asymptomatic men, contact all partners over the last six months or the most recent sexual partner (if outwith that time period).

Health Education

C – Sexual health promotion should be an integral part of contraception provision wherever this is offered.

B – All patients with chlamydial infection should receive appropriate health education, including relevant reading materials.

B – Opportunities should be taken to deliver education in a wide variety of non-health care settings e.g., youth clubs, community centres, schools. Education about chlamydia infection should be integrated with other sexual health education and condom promotion initiatives.

*Definitions:

Grades of Recommendations:

A. Requires at least one randomised controlled trial as part of a body of literature of overall good quality and consistency addressing the specific recommendation. (Evidence levels Ia, Ib)
B. Requires the availability of well conducted clinical studies but no randomised clinical trials on the topic of recommendation. (Evidence levels IIa, IIb, III)
C. Requires evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities. Indicates an absence of directly applicable clinical studies of good quality. (Evidence level IV)

Statements of Evidence

Ia
Evidence obtained from meta-analysis of randomized controlled trials.

Ib
Evidence obtained from at least one randomized controlled trial.

IIa
Evidence obtained from at least one well-designed controlled study without randomization.

IIb
Evidence obtained from at least one other type of well-designed quasi-experimental study.

III
Evidence obtained from well-designed non-experimental descriptive studies, such as comparative studies, correlation studies and case studies.

IV
Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The specific type of supporting evidence is explicitly identified in each section of the guideline.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

A guideline for the management of genital Chlamydia trachomatis infection has the potential to encourage the uptake of effective practice in the identification and

treatment of chlamydial infection. Appropriate testing for chlamydial infections in defined clinical settings should lead to lower complication rates for individuals and in tandem with wider access to contact tracing, should lead to significant falls in re-infection rates and a reduced pool of infection within the community.

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

This guideline is not intended to be construed or to serve as a standard of medical care. Standards of medical care are determined on the basis of all clinical data available for an individual case and are subject to changes as scientific knowledge and technology advance and patterns of care evolve.

These parameters of practice should be considered guidelines only. Adherence to them will not ensure a successful outcome in every case, nor should they be construed as including all proper methods of care or excluding other acceptable methods of care aimed at the same results. The ultimate judgement regarding a particular clinical procedure or treatment plan must be made by the doctor in light of the clinical data presented by the patient and the diagnostic and treatment options available.

Significant departures from the national guideline as expressed in the local guideline should be fully documented and the reasons for the differences explained. Significant departures from the local guideline should be full documented in the patient's case notes at the time the relevant decision is taken.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Scottish Intercollegiate Guidelines Network. Management of genital Chlamydia trachomatis infection. A national clinical guideline. Edinburgh (Scotland): Scottish Intercollegiate Guidelines Network (SIGN); 2000 Mar. 26 p. (SIGN publication; no. 42). [176 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2000 Mar

GUIDELINE DEVELOPER(S)

Scottish Intercollegiate Guidelines Network - National Government Agency [Non-U.S.]

SOURCE(S) OF FUNDING

Scottish Executive Health Department

GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Guideline Development Group: Dr Gordon Scott (Chairman); Dr Carolyn Thompson (Secretary); Dr Ahilya Noone (Methodologist); Dr Geoffrey Clements; Dr Barbara Davis; Dr Barbara Duncan; Dr Anna Glasier; Dr Jane McNaughton; Ms Deborah Olszewski; Dr Jane Roberts; Dr Miriam Santer; Professor Allan Templeton.

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

All members of the Scottish Intercollegiate Guidelines Network (SIGN) guideline development groups are required to complete a declaration of interests, both personal and non-personal. A personal interest involves payment to the individual concerned, e.g., consultancies or other fee-paid work commissioned by or shareholdings in the pharmaceutical industry; a non-personal interest involves payment which benefits any group, unit or department for which the individual is responsible, e.g., endowed fellowships or other pharmaceutical industry support. SIGN guideline group members should be able to act as independently of external commercial influences as possible, therefore, individuals who declare considerable personal interests may be asked to withdraw from the group. Details of the

declarations of interest of any guideline development group member(s) are available from the SIGN executive.

GUIDELINE STATUS

This is the current release of the guideline.

This guideline was issued in 2000 and will be reviewed in 2002 or sooner if new evidence becomes available.

Any amendments to the guideline in the interim period will be noted on the Scottish Intercollegiate Guidelines Network (SIGN) Web site.

GUIDELINE AVAILABILITY

Electronic copies: Available from the Scottish Intercollegiate Guidelines Network (SIGN) Web site.

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Quick reference guide: Management of genital Chlamydia trachomatis infection. Scottish Intercollegiate Guidelines Network, 2000 Mar. 2 p. Available from the Scottish Intercollegiate Guidelines Network (SIGN) Web site.
- SIGN 50: A guideline developer's handbook. Edinburgh (Scotland): Scottish Intercollegiate Guidelines Network, 2001 Feb. (SIGN publication; no. 50). Electronic copies available from the SIGN Web site.
- Appraising the quality of clinical guidelines. The SIGN guide to the AGREE (Appraisal of Guidelines Research & Evaluation) guideline appraisal instrument. Edinburgh (Scotland): Scottish Intercollegiate Guidelines Network, 2001. Available from SIGN Web site.
- A background paper on the legal implications of guidelines. Edinburgh (Scotland): Scottish Intercollegiate Guidelines Network.

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on September 11, 2000. The information was verified by the guideline developer on October 17, 2000.

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Date Modified: 11/8/2004